2017-07-12_8th_TimeSync_Subgroup_Meeting

Participants:

Name	Company
Allen Goldstein	NIST
Amin Abdul	Siemens
Bernhard Baumgartner	OMICRON Lab
Jay Anderson	ComEd
Jay Yab	Moxa
Jean Sebastian Gagnon	Vizimax
Juan Carlos Billalabeitia	GE
Patrice Roussel	Moxa
Paul Myrda	EPRI
Romain Guilbault	OPAL-RT Technologies
Roman Graf	ABB
Ya-Shian Li-Baoud	NIST
Yoann Charpentier	GE

Gustavo Silvano	GE
Allen Goldstein	NIST
Amin Abdul	Siemens

Name	Company
Paul Myrda	Epri
Marcello Dalmas	GE
Ya-Shian	NIST
Bernhard Baumgartner	OMICRON Lab
Roy Lei Zhang	Siemens
Amin Abdul	Siemens
Jean-Sebastien	Vizimax

Housekeeping:
- All E-mail communication is handles via the TimeSync Subgroup Google group.
  To send an E-mail to all group members use: iop-timesync-sg@googlegroups.com

- To enlist for the subgroup either:
  use this link: https://groups.google.com/forum/?hl=en#!forum/iop-timesync-sg and click Apply for membership or
  send an E-mail to bernhard.baumgartner@omicron-lab.com

- All data is stored on the **IOP Sharepoint** server in this directory (and subdirectories)
  TimeSync_Subgroup

- Meeting reports: can be found here Meeting reports

Mission:
- Allow IEC/IEEE 61850-9-3 and IEEE C37.238-2017 focused interoperability testing.
- Offer test bed for people that detect problems in the integrated tests and want to dig into the issue.

Discussed Topics:

- **2017 Test cases:**
  2015 Test cases for IEC/IEEE 61850-9-3 were reviewed and unnecessary tests deleted

  - A new draft is generated after each subgroup meeting. If you want to add comments or modify the draft
    check out the current file and apply your changes. (Make sure that track changes is switched on).

    Current Draft:
    http://iec61850.ucaiug.org/2017IOP-NOrleans/IOP%20Documents/TimeSync_Subgroup/2017
    _Test_Cases/IOP%20PTP%20Test%20Cases%20for%20IEC_IEEE_61850-9-3_Draft_2.docx

    Additional Test cases to be added:

    In relation to the test cases it was decided to have one combined document for
    IEC/IEEE 61850-9-3:2016 AND IEEE C37.238-2017

  - ☑ **Bernhard**: Default settings only - test witch changing domain
    - default domain 0 only
    - recommended domain 93 only - start with 93
    - mixed domains by adding or changing equipment to domain 0

  - ☑ **Jean-Sebastien:** Insert end2end device
    Some devices might be impacted by the end to end traffic - GM end2end and one client end2end
    Draft delivered

  - ☑ **Bernhard: BMCA Idea:** Two Masters fed with different GPS Signals - how will this affect the BMCA
    configure long cable length to simulate static offset at one GM
    400 ns.

  - ☐ **Bernhard:**
    Power Down GM
    Power Down OC (IED)
    Power Down infrastructure
    Clause 7.1
    Powering up grandmasters with and without synchronization signal.

  - **Bernhard:** Isolated Testing IED restart [AG1]

    Testing IED restart / power up of a GOOSE subscriber[AG1]
    Restart of all components (GM, TC, BC and OC) should be tested
    How is impact on the other devices.

  - ☐ **Jean-Sebastien:** Test on traceable flags

  - ☐ **Bernhard:** Check with TC Manufacturer if multi-domain TCs are available.
    Bernhard Figure out how TC manufacturers react on multiple clock domains (is it possible to map a port to
    both domains) - irrelevant for unsyntonized TC - otherwise it is relevant.

  - ☐ What are the network failure modes in this case?
    - ☐ HSR & PRP - single point failure
    - ☐ **Amin** to provide short E-mail to Bernhard
    - ☐ **Gustavo** will also provide input RSTP & PRP
    - ☐ Bernhard to send a reminder to Johannes.
    - ☐ Jay to send Topology proposals for additional test cases

  - Monitoring:
    Commercial test device like (**Calnex Paragon-X**) - measuring timing accuracy, Allen plans to bring a Calnex
    (to be confirmed)

- **Equipment list:**
  Every participant in the time sync subgroup should enter his equipment into the equipment list that can be found on the server:
  http://iec61850.ucaiug.org/2017IOP-NOrleans/IOP%20Documents/TimeSync_Subgroup/1588_Equipment_list.xlsx

  - PICS for all 9-3 equipment that will be brought to the IOP should be submitted in addition to entering them into the Equipment list.

- **Time Reference**
  - GPS Security (Spoofing and Jamming) should be evaluated.
  - GLONASS should be tested as well if possible. --> Jean Sebastian might be able to borrow a simulator
  - In-Room transmission of GPS Signal from Simulator would be better than distributing an L-Band Signal via cables (problems for some devices) --> Bernhard to check --> **GPS transmission not possible. GPS repeating requires a license.**
  - Might be interested to have a re-broadcast of live GPS signal for the integrated testing.
  - ☐ **PAUL:** Talk to Herb about **experimental license**
  - ☐ **PAUL:** we need to know the **distances - still open - Paul is working on it - thanks -**
  - ☑ **Bernhard:** Check if the cable needs to be plenum rated **- not needed if we tape it to the floor**

- **Transparent Clock Manufacturers:**
  - We need to get the following companies on board:
  - ☐ **PAUL**: Cisco (has agreed to participate in the IOP)
  - ☐ **PAUL**: Arbiter (has not heard from Arbiter - will follow up)
  - ☐ GE Switches
  - ☑ Moxa **(Bernhard) - does also have one step clock they will bring it**

Questions:
? ☐ Does someone have a GLONASS Simulator for testing?
? ☐ Who can help to contact the switch manufacturers?
    ☑ **Bernhard:** Combine all tests in one document

To dos:
☐ EVERYBODY: Please enter the equipment you plan to bring into the Spreadsheet available on the Sharepoint
☐ EVERYBODY: Review current 9-3 Test Case Draft and provide comments.
☐ Jean Sebastian: Check if GPS/GLONASS simulator is available - check if you can borrow one or get specialists to come.
☐ Bernhard: Prepare proposal for PICS Template

Next meeting:

Wednesday July 26th
15:30 CEST - invitation will follow